

# **CANADIAN MANUFACTURING MARKET STUDY**



# OUTLINE

- Objectives
- User Survey Results
- Vendor Survey Results
- Summary
- Recommendations



## **OBJECTIVES**

- **Ascertain Health of Canadian Manufacturing Industry and Future Trends**
- **Identify User Criteria for Selecting a Vendor**
- **Determine Manufacturing Systems/Software Vendors' Criteria for Success in the Canadian Market**
- **Analysis and Recommendations**



# **USER SURVEY RESULTS**





## DEMOGRAPHICS: USER'S INDUSTRIES

SIC	DESCRIPTION	NUMBER OF RESPONSES
2600	Paper Products	2
3400	Fabricated Metal Products	4
3500	Machinery, Except Electrical	5
3600	Electrical and Electronic Equipement	3
3700	Transportation Equipment	0
-	Industry Unknown	1
	Total	15



## SOURCES OF POTENTIAL SUPPLIERS

SOURCE	NUMBER OF RESPONSES
● Advertisements	8*
● Industry Associations	5
● Existing Hardware Vendor	4**
● Consultant	3
● Convention	1
● Trade Show	1
● Direct Mail	1

\* 8 Divided us as Follows:

Trade Magazines	- 4
CIM Magazine	- 1
PC Magazine	- 1
No Response	- 2

\*\* IBM - All Four Mentions



## **INITIAL VENDOR SELECTION FACTORS**

### **APPROACH**

- **Open-Ended Questions**
- **Respondents Asked to Name Top 3 Factors**
- **Weighting of Factors (1 = 3, 2 = 2, 3 = 1)**
- **Ranked in Decreasing Order**



## INITIAL VENDOR SELECTION FACTORS

FACTOR	WEIGHTED SCORE	NUMBER OF FIRST PLACE MENTIONS
Cost/Price	16	1
Hardware/Software Compatibility	15	5
Functionality//Meets Requirements	15	2
Local Support/ Quality of Support	12	3
User Friendliness/Ease of Operation/ Documentation	7	1
Vendor Reputation/Size of Vendor/ History of Vendor	6	1
Reference Installations	4	0
Flexibility of System	3	1
Speed/Performance of System	3	1
Ease of Conversion	2	0
Integrated Software Modules	1	0





## RANKING OF INITIAL SELECTION FACTORS

### APPROACH

- Aided Recall
- Each Factor Ranked on a Scale (5 = High, 1 = Low)
- Weighting of Factors (5=5,4=4,3=3,2=2,1=1)
- Ranked in Decreasing Order

### RESULT:

FACTOR	WEIGHTED SCORE	RANGE (L - H)	NUMBER OF "5" MENTIONS
Software Fits User Requirements	64	3 - 5	9
Training/Documentation	61	3 - 5	6
User Friendliness	56	2 - 5	6
Flexibility of Software	56	2 - 5	4
Vendor Reputation	55	2 - 5	5
Speed/Performance of Software	55	2 - 5	4
Reference Installations	53	2 - 5	2
Software Maintenance/ Updates	53	3 - 5	2
Price	50	3 - 5	1
Hardware Environment	49	1 - 5	4
Nationality of Vendor	14	1 - 2	0



## OTHER FACTORS USED IN INITIAL SELECTION

### APPROACH

- Asked Following Aided Recall Ranking of Selection Factors
- Open-Ended
- Ranking (5 = High, 1 = Low)
- Order Based on Number of Mentions

### RESULT:

FACTOR	NUMBER OF MENTIONS	SPECIFIC MENTIONS
Vendor Knowledge	2	5;5
Long-Term Cost of Ownership/Service	2	4;4
Good Bug Fixes/Patches	1	5
Accuracy of Software (Functionality)	1	5

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## FACTOR USED AS TIEBREAKER

### APPROACH

- Assume: 2 - 3 Equally Qualified Finalists
- Select: "Tiebreaker" Criterion
- Open-Ended Question

### RESULTS

FACTOR	NUMBER OF MENTIONS
Reference Installations	5
Cost/Price	5
Local Service/Quality of Service	3
Flexibility of Hardware	1



## CANADIAN VERSUS U.S. VENDOR

### QUESTION:

"Would you choose a U.S. vendor over a Canadian vendor, all things being equal?"

### RESULT:

#### ● Would Choose Canadian Vendor - 8

##### Reasons Cited:

- Geographical Proximity
- More Convenient Location
- Exchange Rate Differences
- Local Support

#### ● Would Choose U.S. Vendor - 2

##### Reasons Cited:

- Larger
- More International Locations

#### ● "Does Not Matter" - 5





## INDICATORS OF HEALTHY MANUFACTURING INDUSTRY

### QUESTION:

- What signs do you associate with a healthy manufacturing industry?

### RESULTS:

FACTOR	NUMBER OF MENTIONS
● Sales Growth in that Related Industry	5
● Low Interest Rates	4
● Low Unemployment	2
● Low Inventory Levels	2
● Overall Economic Indicators	2
● Growth in Capital Spending	2
● Manufacturing Capacity Level	1
● Industry Profitability	1
● ROI Growth	1
● Consumer Price Index	1
● Price of Oil	1
● Housing Starts	1
● Low Inflation	1
● Low Jones Industrial Average	1



## STATE OF CANADIAN DISCRETE MANUFACTURING

### QUESTION:

- What is your view of the state of the Canadian Discrete Manufacturing Industry?

### RESULT:

- Healthy - 9
- Not Healthy - 3
- Unknown - 1
- No Response - 1

### NEGATIVE COMMENTS:

- Not Competitive with Japanese - 2
- Canadian Firms Are Complacent/Risk Averse - 2
- Layoffs/Union Problems Expected - 2



## RESPONSE TO STATEMENT

### STATEMENT:

"Should manufacturers continue spending during industry slump?"

<u>RESPONSE</u>	<u>NUMBER OF MENTIONS</u>
Agree	11
Disagree	2
Neutral/No Response	2

### COMMENTS:

- "Go ahead only if you have capital/cash flow."
- "Nice if you can do it; a balancing act."
- "Firms should not spend in middle of recession unless they have extra money to begin with."
- "Must spend money to make money."
- "Do not go overboard; but spend to be ready for next growth phase."

# Introduction

The purpose of this study is to investigate the effects of the proposed system on the performance of the participants. The study was conducted in a controlled environment and the results are presented in the following sections.

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## USER DP EXPENDITURES

### QUESTION:

- How has your DP budget spending changed in the past year?

### RESULTS:

- Past Year

ACTION	NUMBER	RANGE	MEAN	MEDIAN
Increase	9	8-100%	35%	20%
Decrease	4*	10-50%	30%	30%
Same	2	-	-	-

- Next Year

Increase	7	10-100%	36%	30%
Decrease	6*	10-50%	22%	10%
Same	1	-	-	-
Unknown	1	-	-	-

\* 1 Respondent did not specify percent decreases





## LIST OF FINALISTS

### QUESTION:

- Based on your current knowledge of manufacturing systems and software, please select 3 vendors who you would place on a "short list".

### APPROACH:

- "True Test" of name recognition
- No previous mention of specific companies

<u>COMPANY</u>	<u>TOTAL MENTIONS</u>	<u>FIRST PLACE MENTIONS</u>
IBM	9	6
DEC	5	2
Honeywell	4	1
Burroughs	3	0
Sperry	2	1
Hewlett-Packard	2	0

### ONE MENTION EACH:

- |                      |                     |
|----------------------|---------------------|
| ● UCC                | ● McCormack & Dodge |
| ● CSG                | ● Martin Marietta   |
| ● ENMASSE            | ● NCR               |
| ● DATAPOINT          | ● Data 3            |
| ● General Automation | ● AT&T              |
| ● 3M                 |                     |



## **REASONS FOR SELECTION TO SHORT LIST**

- **IBM**

- Experience With Company/Company's Products - 4
- Support/Service - 2
- Reputation
- Good Software
- Reliability

- **DEC**

- Quality of product
- Reliability
- Experience With Company/Company's Product
- Inexpensive to Maintain
- Market's Acceptance of DEC

- **Burroughs**

- Well-established Company
- Reputation



## **REASONS FOR SELECTION TO SHORT LIST**

- **UNIVAC**
  - Reputation
- **Honeywell**
  - Size of Company
  - Responsive to Current Market Needs
  - Quality of Software
- **DATA 3**
  - Comprehensiveness of Package
- **Other Comments**
  - "Most MRP II Software Runs on DEC, Hewlett-Packard, or IBM Systems"



## FAMILIARITY WITH SELECTED VENDORS

### APPROACH:

- "Very Familiar;" "Familiar," "Not Familiar"
- Listed Alphabetically on Questionnaire
- Scoring
  - Very Familiar: 3
  - Familiar: 2
  - Not Familiar: 1
- Maximum Score: 45





## FAMILIARITY WITH SELECTED VENDORS (Cont.)

### RESULTS:

<u>VENDOR</u>	<u>SCORE</u>	<u>NUMBER OF "VERY FAMILIAR" MENTIONS</u>
IBM	42	12
Hewlett-Packard	35	6
Honeywell	35	6
CSG	30	3
MAI	28	3
Columbia	26	1
NCA	19	1
ASK	19	0
SAFE	16	0



## OTHER COMMENTS

### APPROACH:

- Last Question Asked
- Open Ended
- Only Two Responses
  - "U.S. goods are prohibitively expensive in Canada. A \$150,000 system with duties equals \$400,000 (Canadian)".
  - The Canadian market is not that different from the U.S. market.



# **VENDOR SURVEY RESULTS**



## **VENDOR DEMOGRAPHICS**

- **Vendors Surveyed: 5**
  
- **Years Selling in Canadian Manufacturing Market**
  - **Less Than 7: 3**
  - **Greater Than 20: 2**





## STATE OF CANADIAN MANUFACTURING MARKET

### RESULTS:

- Positive Outlook: 3
- Negative Outlook: 2

### COMMENTS:

- "We're seeing more pilots and small projects, not large capital spending projects".
- Shifting from mainframes to dedicated minicomputers, especially DEC.
- Pharmaceutical and auto industries are up.
- Canada is a "Branch Plant" economy, with major decisions made in U.S.



## REASONS FOR ENTERING THE MARKET

### APPROACH:

- Open-ended Question
- Expected Responses
  - Based on Market Research
  - Sold 1-2 Accounts

### RESPONSES: (3)

- "Started with professional services group in manufacturing; it evolved into selling software".
- "Always in Canadian market"  
(Canada-Based Supplier)
- "Sold 60 systems through agent; decided to set up operation there". (United Kingdom-Based Supplier)



## **MANUFACTURERS' DEFINITION OF "SUCCESS" IN NEW MARKET**

### **APPROACH:**

- **Open-Ended Question**

### **RESULTS:**

- **Responses: 4**
  - **Based on Profitability - 1**
  - **Based on Sales - 1**
  - **Based on Name Recognition/Unsolicited Inquiries Received - 2**
- **No Response - 1**
- **Comment**
  - **"Plan for loss for first 18 months and breakeven or profit after 2 years. We did not make a profit until 3 years".**



## NUMBER OF SYSTEMS SOLD REQUIRED FOR "SUCCESS"

### ASSUMPTION:

- Sales Used as Determinant of Success

### QUESTION:

- How Many Sales Were Required to Be Successful?
- Responses -4
  - 1-3: 0
  - 4-6: 2
  - 7-10: 0
  - Greater than 10: 2
- No Response - 1
- Comment
  - Depends on Product Type





## TIME ALLOWED TO BE SUCCESSFUL

### APPROACH:

- Open-Ended Question

### RESULTS:

- Responses: 4
  - Less Than 1 Year: 1
  - 1-1.9 Years: 0
  - 2-2.9 years: 2
  - 3 Years: 1
  - Greater Than 3 Years: 0
- No Response: 1
- Comments
  - "Planned on 2 years; it took 3 years".
  - "After 15 months - -make go/no go decision".



## **COMPANY'S SUCCESS IN CANADIAN MARKET**

### **QUESTION:**

- "Has your company been as successful as you had anticipated in Canadian Discrete Manufacturing Market?"

### **RESULTS:**

- Responses: 5
  - Yes: 2
  - No: 3



## **"YES" RESPONSES - - WHY?**

### **APPROACH:**

- **Open-Ended Question**

### **REASONS:**

- **"Good evaluation of prospects and good system installation".**
- **"Complete solution offered in all segments of manufacturing". (Plus: those "3 Initials"!)**

## CHINESE

1. 中国

2. 北京

3. 上海

4. 广州

5. 香港

6. 深圳

7. 珠海

8. 澳门

9. 天津

10. 重庆

11. 成都

12. 武汉

13. 南京

14. 杭州

15. 苏州

16. 无锡

17. 常州

18. 南通

19. 扬州

20. 镇江

21. 徐州

22. 蚌埠

23. 合肥

24. 南昌

25. 长沙

26. 桂林

27. 昆明

28. 拉萨

## **"NO" RESPONSES - - WHAT ADJUSTMENTS?**

### **APPROACH:**

- **Open-Ended Question**

### **RESULT:**

- **Changes Made:**
  - **Break MRP into pieces to reduce cost of initial sale, sale then becomes "Buy 1 piece. If the economy improves, then buy more".**
  - **Take industry specific approach (i.e., Pharmaceutical and aerospace/defense manufacturers)**
  - **Converted software to run on DEC VAX (customers' most acceptable hardware)**





## **DIFFICULTIES IN DEALING WITH CANADIAN MANUFACTURING MARKETING**

### **APPROACH:**

- **Open-Ended Question**

### **RESULT:**

- **Responses: 5**
  - **Very Conservative Market: 2**
  - **Slow Decisionmaking: 1**
  - **Not Looking at Worldwide Opportunities: 1**
  - **Role of U.S. Companies: 2**
    - **Perfers Use of CPUs in U.S.**
    - **U.S. Plants get Initial Purchase of New Technologies**



## **MANUFACTURERS' ADJUSTMENTS TO MARKET DIFFICULTIES**

### **QUESTION:**

- **How are you adjusting to the market difficulties?**

### **RESULT:**

- **Responses:**
  - **Sells integrated software/hardware solutions to customers. Emphasizes reduced 5 year cost of ownership with sole source for software/hardware/service.**
  - **Breaks out modules. Makes initial sale by selling one module; sells additional modules(that work together) as customer's business improves.**



## IMPACT OF SPECIFIC FACTORS

### APPROACH:

- Aided-Recall

### RESULTS:

- "Longer Decision Cycle"
  - 5 Responses
  - No Impact (Always Been There)
- Canadian Geography
  - 3 of 4 Respondents Concentrate on Toronto, Ottawa, Montreal or Some Combination
  - 1 Vendor has offices throughout Canada
  - No Response: 1
- Influence of U.S. Parent Company
  - Responses: 1 Neutral; 4 Relatively Negative Opinions
  - "Canada is 6 months to a year behind U.S. in Implementing technology" : 2
  - "U.S. parent will put sale on hold or cancel sale": 2
- Trans Border Costs
  - Not a Factor for 4 of 5 Respondents
  - "Makes it more difficult for smaller companies to survive".
- Other Factors
  - "GM/MAP Must be made affordable for medium size companies".
  - "U.S. sneezes, Canada gets a cold".



**SUMMARY:**  
**"STATE OF THE CANADIAN DISCRETE  
MANUFACTURING MARKET"**

● **Users (15)**

- **"Healthy": 67%**
- **"Not Healthy": 33%**

● **Vendors (5)**

- **"Healthy": 60%**
- **"Not Healthy": 40%**





## **SUMMARY: USERS' PRIMARY RESPONSES**

- **Top 4 User Selection Criteria Emphasized Practical Considerations**
- **#1 Tiebreaker Among Selection Criteria Is User Oriented ("Reference Installations"). Cost Is #2**
- **54% of Respondents Would Select Canadian Vendor Over U.S. Vendor, All Things Equal. However, 33% Said It Did Not Matter and 13% Would Choose a U.S. Vendor.**



## **INPUT ANALYSIS: USER COMMENTS**

- **Past year's DP budget grew about 25%; next year's DP budget growth is expected to slow to approximately 20%**
- **In Canada, users are most familiar with hardware vendors selling a complete manufacturing system solution (IBM, DEC, Honeywell, Burroughs, Sperry, Hewlett-Packard).**
- **Users justify selection of hardware vendors generally with non-product attributes: vendor reputation, company experience, product reliability, good service.**



**SUMMARY:  
VENDOR SUCCESS IN THE CANADIAN  
DISCRETE MANUFACTURING MARKET**

- **Time to Become Successful (4)**
  - **Less Than 1 Year: 25%**
  - **1-1.9 Years: 0**
  - **2-2.9 Years: 50%**
  - **3 Years: 25%**
  
- **Vendor Perception of Success (5)**
  - **Yes: 40%**
  - **No: 60%**



**SUMMARY:  
ADJUSTMENTS BY VENDORS TO BECOME  
SUCCESSFUL**

- **Repackaging MRP II Software Into Smaller Modules to Make Initial Sale**
- **Targeting Specific Segments Within the Manufacturing Market**
- **Developing Software for DEC, Along With Hewlett-Packard or IBM**
- **Developing Proprietary Links Between DEC and IBM Based Software.**





**SUMMARY:  
IMPACT OF SPECIFIC FACTORS ON  
VENDOR SALES**

● **Important Factors**

- **Influence of U.S. Parent Company**

● **Neutral Factor**

- **Canadian Geography**

● **Unimportant Factors**

- **Longer Decision Cycle**
- **Trans-Border Costs**

